

Notice of Allowability

Application No.

10/612,116

Examiner

Vikansha S. Dwivedi

Applicant(s)

MATSUMOTO ET AL.

Art Unit

3746

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 9/6/2006.
2. ☒ The allowed claim(s) is/are 7, 8, 10, 11, 14-18 and 20 (As numbered by the applicant).
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input checked="" type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date <u>NA</u> . |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

DETAILED ACTION

This office action is in response to the request for withdrawal of finality of Office Action of June 1, 2006. Applicant's request is fully considered and in view of same the Office Action of June 1, 2006 is hereby withdrawn.

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Anna Vishev on September 21st 2006.

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1 - 6 (Cancelled)

7. (Previously Presented) The apparatus according to claim 18, wherein a front side of the at least one intake blade of the first ventilator faces in an opposite direction from a front side of the at least one exhaust blade of the second ventilator.

8. (Previously Presented) The apparatus according to claim 10, wherein the first ventilator is positioned on an air intake opening side of the casing, and the second ventilator is positioned on an air exhaust opening side of the casing.

9. (Cancelled)

10. (Previously Presented) The apparatus according to claim 18, further comprising:

a casing in which the first and second ventilators are housed.

11. (Previously Presented) The apparatus according to claim 10, further comprising:

at least one rib attached to the casing;

a motor base fixed to the at least one rib;

a bearing support, having a tubular shape and anchored to the motor base; and

at least one bearing supported by the bearing support;

wherein at least one of said first rotating shaft and said second rotating shaft is supported by an inner circumference of the at least one bearing.

12-13. (Cancelled)

14. (Previously Presented) An apparatus for a serial ventilation device comprising:

a casing;

a first ventilator, mounted on an air intake opening side of the casing, having a first rotating shaft and at least one intake blade having a front surface facing the air intake opening side and a rear surface, said at least one intake blade being mounted on said first rotating shaft; and

a second ventilator, mounted on an air exhaust opening side of the casing, having a second rotating shaft and at least one exhaust blade with a front surface facing the air exhaust opening side and a rear surface, said at least one exhaust blade being mounted on said second rotating shaft,

wherein the first ventilator performs ventilation from the front surface to the rear surface of the at least one intake blade and then towards the second ventilator, and the second ventilator performs ventilation from the rear surface to the front surface of the at least one exhaust blade and then towards the exhaust,

further wherein said first rotating shaft is independent from and coaxial to said second rotating shaft;

further wherein said rotating shafts rotate in opposite directions;

further wherein each of said ventilators comprise a motor base, with an outer circular wall shaped in a tilted configuration such that a diameter of the outer circular wall of said motor base decreases to the midpoint between the first and second ventilators.

15. (Previously Presented) The apparatus according to claim 14, further comprising:

at least one rib attached to the casing; said motor base being affixed to the at least one rib;

a bearing support, having a tubular shape and being anchored to the motor base; and

at least one bearing supported by the bearing support,

wherein at least one of said first rotating shaft and said second rotating shaft is supported by an inner circumference of the at least one bearing.

16. (Previously Presented) The apparatus according to claim 14, wherein said first rotating shaft is coupled to an impeller, and wherein said at least one intake blade is affixed to said impeller.

17. (Previously Presented) The apparatus according to claim 14, wherein said second rotating shaft is coupled to an impeller, and wherein said at least one exhaust blade is affixed to said impeller.

18. (Currently Amended) An apparatus for a serial ventilation device, comprising:

a first ventilator having a number of intake blades mounted on a first rotating shaft; and

a second ventilator having a number of exhaust blades mounted on a second rotating shaft, said number of exhaust blades being at least one blade fewer than said number of intake blades,

wherein said first rotating shaft is independent from and coaxial to said second rotating shaft;

further wherein said rotating shafts rotate in opposite directions; and

further wherein said first and second ventilators are positioned in series with respect to each other such that they ventilate air along the same line in the same direction.

wherein said first rotating shaft is coupled to an impeller,

and wherein said at least one intake blade is affixed to said impeller.

19. (Cancelled)

20. (Currently Amended) ~~The apparatus according to claim 18,~~ An apparatus for a serial ventilation device, comprising:

a first ventilator having a number of intake blades mounted on a first rotating shaft; and

a second ventilator having a number of exhaust blades mounted on a second rotating shaft, said number of exhaust blades being at least one blade fewer than said number of intake blades,

wherein said first rotating shaft is independent from and coaxial to said second rotating shaft;

further wherein said rotating shafts rotate in opposite directions;

further wherein said first and second ventilators are positioned in series with respect to each other such that they ventilate air along the same line in the same direction,

wherein said second rotating shaft is coupled to an impeller,

and wherein said at least one exhaust blade is affixed to said impeller.

Allowable Subject Matter

Claims 7, 10, 8, 11, 14-18 and 20 are allowed.

The following is an examiner's statement of reasons for allowance: Claims 14, 18 and 20 disclose a serial ventilation device that has a two ventilators with different number of blades and are mounted on two different shafts such that the two shafts are independent and coaxial with each other. The number of blades on the first ventilator that is located on the intake side is more than the number of blades located on the exhaust side. The two shafts rotate in opposite directions and the two ventilators are in series with respect to each other. Claim 14 also discloses a motor base that has an outer circular wall in a tilted configuration, the motor base decreasing to the midpoint between the two ventilators. Dent discloses a fan assembly for cooling purposes, it has two fans in a housing. The first and the second axis of rotation as disclosed by Dent can either coincide or it can be slightly offset, it is a counter-rotating coaxial fan assembly, it also discloses that counter rotating serial fans produce a greater volume of air flow than serial fan with blades rotating in the common direction. Prior art does not disclose rotating shaft coupled to an impeller and at least one exhaust blade affixed to impeller.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."


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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vikansha S. Dwivedi whose telephone number is 571-272-7834. The examiner can normally be reached on M-F, 8-4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy S. Thorpe can be reached on 571-272-4444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

VSD


Charles Freay
Primary Examiner